

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1 - 19. (Cancelled)

20. (New) A nucleic acid enzyme capable of recognizing and cleaving a nucleic acid substrate, said nucleic acid enzyme comprising :

- (i) a first nucleotide sequence 5' - GGGUCCACCUCCUCGCGGUN¹N²N³N⁴N⁵N⁶N⁷GGGCAUGCS¹B¹Y -3' (SEQ ID NO: 65); and
- (ii) a second nucleotide sequence 5' - B²KS²GCAUGGCUAAGGGACCC -3' (SEQ ID NO: 66);

wherein S¹ and S² are each independently selected from the group consisting of G and C;

B¹ and B² are each independently selected from the group consisting of G, C, U and T;

Y is selected from the group consisting of C, U and T;

K is selected from the group consisting of G, U and T;

N¹N²N³N⁴N⁵N⁶N⁷ forms a substrate binding region;

N¹, N², N³, N⁴, N⁵ and N⁶ are a nucleotide which may be the same or different;

N⁷ is U;

N⁷ is capable of forming a wobble pair with the substrate;

N¹, N², N³, N⁵ and N⁶ are capable of forming conventional Watson-Crick base pairs with the substrate; and

N^4 is capable of forming a triplet with the substrate, said triplet comprising a non-conventional Watson-Crick base pair and a conventional Watson-Crick base pair.

21. (New) The nucleic acid enzyme of claim 20, wherein said enzyme comprises a nucleotide sequence selected from the group consisting of:

(i) 5' - GGGUCCACCUCCUCGCGGU $N^1N^2N^3N^4N^5N^6N^7$ GGGCAUGCGGCCUU CGCAUGGCUAAGGGACCC - 3' (SEQ ID NO: 61); and

(ii) 5' - GGGUCCACCUCCUCGCGGU $N^1N^2N^3N^4N^5N^6N^7$ GGGCAUGCCUUCG GGCAUGGCUAAGGGACCC -3'(SEQ ID NO: 62).

22. (New) The nucleic acid enzyme of claim 20, wherein said first nucleotide sequence is 5' - GGGUCCACCUCCUCGCGGU $N^1N^2N^3N^4N^5N^6N^7$ GGGCAUGCGCC -3'(SEQ ID NO: 63) and said second nucleotide sequence is 5' - GGCGCAUGGCUAAGGGACCC -3'(SEQ ID NO: 64).

23.(New) The nucleic acid of claim 20, wherein $N^1N^2N^3N^4N^5N^6N^7$ is selected from the group consisting of:

- (i) CCGACCU;
- (ii) CCCAGCU;
- (iii) GGGAUAU;
- (iv) CCGCCCU;
- (v) CCGGCCU;
- (vi) CCGUCCU;
- (vii) CCGAACU;
- (viii) CCGAGCU;
- (ix) CCGAUCU;
- (x) CCUCUUU;

- (xi) CCUUGUU;
- (xii) UGUUCUU;
- (xiii) GGGGUUU;
- (xiv) UCCCCUU;
- (xv) GGACUCU;
- (xvi) UCGACUU; and
- (xvii) GCCACCU.

24.(New) The nucleic acid enzyme of claim 20, wherein the enzyme comprises three or more distinct double-stranded regions, and two or more distinct single-stranded regions, wherein the substrate binding portion is comprised by one of the single-stranded regions.

25.(New) The nucleic acid enzyme of claim 20, wherein the enzyme is derived from hepatitis delta virus.

26.(New) The nucleic acid enzyme of claim 20, wherein the substrate is composed of ribonucleotides.

27.(New) The nucleic acid enzyme of claim 20, wherein the substrate is composed of a mixture of ribonucleotides and deoxyribonucleotides.

28.(New) The nucleic acid enzyme of claim 20, wherein the enzyme is composed of ribonucleotides.

29.(New) The nucleic acid enzyme of claim 20, wherein the enzyme is composed of a mixture of ribonucleotides and deoxyribonucleotides.

30.(New) The nucleic acid enzyme of claim 20, wherein the nucleotide residue of said substrate directly 5' to the cleavage site does not form a base pair with said enzyme.

31.(New) A method for cleaving a nucleic acid substrate with a nucleic acid enzyme comprising mixing said substrate with the nucleic acid enzyme of claim 20.

32.(New) The method of claim 31, wherein the substrate is composed of ribonucleotides.

33.(New) The method of claim 31, wherein the substrate is composed of a mixture of ribonucleotides and deoxyribonucleotides.